REMARKS

On pages 2-8 of the Office Action, claims 1-11, 13, 14, and 27-29 were rejected under 35 USC § 103(a) as unpatentable over Waclawsky et al. (U.S. Patent No. 5,974,457) in view of Nuansri et al. ("An Application of Neural Network and Rule-Based System for Network Management: Application Level Problems"). Accordingly, claims 1-11, 13, 14, and 27-29 are pending and under consideration.

As discussed in the response to the December 20, 2005 Office Action, Waclawsky et al. disclosed a rule-based system. A rule-based system is not the same as a statistical estimator. Rule-based systems consist of a number of manually defined rules representing what the rule-based system's designers consider to be an expert in the field's knowledge base. In contrast, a statistical estimator, such as the neural network recited in claim 1, does not require an expert to create rules. Rather, the statistical estimator represents the required knowledge after training in implicit form. Thus, by relying on a rule based system, Waclawsky et al. teaches away from a statistical estimator training system.

Nuansri et al. disclosed a hybrid system that combines a neural network system with a rule-based system. The two systems are discrete parts of the overall system, as shown in Fig. 13 on page 480. Specifically, in Nuansri et al., the neural network system is labeled BRAINNE in Fig. 13 and the rule-based system is labeled NEXPERT according to section 5. Furthermore, as further described in section 5, "BRAINNE is used as an automated knowledge acquisition tool that allows us to extract ... DNS faults (errors) and their causes while the NEXPERT system is later used as a rule-based expert system for the analysis and diagnosis part." Thus, the system described in Nuansri et al. used a neural network system as a pre-processor to a rule-based system.

Claim 1 recites "determining from the possible dependences a normal range of dependence for at least some of the devices and services essentially undisturbed states to train a neural network as a statistical estimator" (claim 1, lines 8-10). The first two lines of page 4 in the Office Action alleged that Nuansri et al. "train[ed] a neural network as a statistical estimator to effectuate network monitoring and diagnosing." The Applicant's disagree with this assessment of Nuansri et al.

One shortcoming of the Office Action's assessment regarding Nuansri et al. is the failure to cite where Nuansri et al. disclosed a *statistical estimator*. Nothing can be found in Nuansri et al. that teaches any statistical methods used to act as a statistical estimator. What has been found, in sections 5.1, describe the training of BRAINNE by reading a log file to retrieve error

messages as one component and "extracting knowledge from experience and human experts and from forcing faults on a name server" to retrieve possible causes of the error messages as the second component. Since the training of BRAINNE uses log files to retrieve error messages, it is submitted that Nuansri et al. does not describe anything "determining from the possible dependences a normal range of dependence for at least some of the devices and services essentially undisturbed states" as recited in claim 1 at lines 8-9.

Additionally, as discussed above, Nuansri et al. does not describe the neural network system as a monitoring or diagnosing system, but rather as a pre-processor. This is evident by the structure shown in Fig. 13, where the neural network system (BRAINNE) outputs to the rule-based system (NEXPERT KB) in the sub-graph labeled "Learning Process" and the rule-based system (NEXPERT interface) received its input from a log file in the sub-graph labeled "Monitoring and diagnosing Process" in the figure.

Furthermore, Applicants respectfully submit that the combination of Waclawsky et al. and Nuansri et al. is improper. In the Office Action, Nuansri et al. is relied upon as disclosing the statistical estimator requirements of the claim as recited in the third operation of claim 1. However, all other operations recited in the claimed method are allegedly taught or suggested by Waclawsky et al. The references Nuansri et al. and Waclawsky et al. are disparate teachings raising the question of why a person skilled in the art would even consider these references for combination, a question the PTO must answer[1]. The statements in the Office Action that Nuansri et al. is "an analogous art"[2] and that "it would have been obvious to a person skilled in the art at the time of the applicant's invention to modify ..."[3] are conclusory statements that do not constitute "sufficient factual findings."[4] Applicants respectfully traverses the obviousness rejection based on Waclawsky et al. and Nuansri et al. because there is insufficient evidence for a motivation to use the method of Nuansri et al. in the system described by Waclawsky et al. While the required evidence of motivation to combine need not come from the applied

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[1] See *In re Lee*, 277 F3d 1338, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), requiring the PTO to "explain the reasons one of ordinary skill in the art would have been motivated to select the references."

[2] See item 9 of the Office Action, lines 2-3.

[3] See item 10 of the Office Action, lines 7-8.

[4] MPEP 2144.08 III states that "[e]xplicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. § 103 ground of rejection. . . Conclusory statements of similarity or motivation, without any articulated rational or evidentiary support, do not constitute sufficient factual findings."

references themselves, the evidence must come from *somewhere* within the record.[5] In this case, the record fails to support the proposed combination.

Dependent claims 2-14 depend from claim 1. Independent claims 27-29 recite statistical estimator limitations in a manner similar to claim 1. Thus, claims 2-14 and 27-29 distinguish over the applied art for the reasons discussed in regard to claim 1.

Summary

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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[5] *In re Lee*, 277 F.3d 1338, 1343-4, 61 USPQ2d 1430 (Fed. Cir. 2002) ("The factual inquiry whether to combine references ... must be based on objective evidence of record. ... [The] factual question of motivation ... cannot be resolved on subjective belief and unknown authority. ... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion").